



Fire Protection Training

Procedures Handbook 4300

HOSE APPLIANCES & TOOLS

TOPIC: Four-way Hydrant Valves

TIME FRAME: ::15

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will describe the functions and uses of a four-way hydrant valve.

Standard: With a minimum of 80% accuracy

MATERIALS NEEDED:

- White board and erasable markers
- One (1) four-way hydrant valve used locally
- Appropriate visual aids

REFERENCES:

- IFSTA, Essentials of Fire Fighting, 5th Edition, Chapter 13

PREPARATION:

In those areas where large diameter hose is not available or where water systems are poor, the four-way hydrant valve is an essential firefighting appliance. In many instances, boosting a hydrant with a four-way valve may save the time and effort of laying a dual hose lay. In all instances, the effectiveness of a single forward hose lay can be enhanced.



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FOUR-WAY HYDRANT VALVES

| PRESENTATION | APPLICATION |
|--|-----------------------------|
| <p>I. PURPOSE</p> <p>A. To provide a means of changing from an unsupported hydrant supply line to a supply line supported by an engine without interruption of the flow of water.</p> <p>B. Types</p> <ol style="list-style-type: none">1. Variety of styles and manufacturers<ol style="list-style-type: none">a. Blakeb. Akronc. Humat <p>II. OPERATION</p> <p>A. First in Engine</p> <ol style="list-style-type: none">1. Connects four-way valve to the hydrant2. Lays an unsupported (unboosted) supply line to the fire (forward lay)3. When hydrant opened water flows to engine <p>B. Second in Engine</p> <ol style="list-style-type: none">1. Akron<ol style="list-style-type: none">a. Connects to the discharge or outlet on the hydrant valve and opens the valveb. Water now flows to both enginesc. Second engine connects to inlet on the four-way valve and pumps to the first in engine through the four-way valve (1) May have to reposition valve2. Blake<ol style="list-style-type: none">a. Second in engine connects to the four-way valve inlet and the pump discharge and supports the supply line from tankb. Then connects from four-way valve outlet to the pump suction inlet | <p>Information Sheet #1</p> |

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| PRESENTATION | APPLICATION |
|--|-------------|
| <ul style="list-style-type: none"><ul style="list-style-type: none">c. Four-way hydrant valve is then repositioned to divert hydrant water from supply line to the line supporting second in engineC. If done properly, there should be no interruption of the fire flow <p>III. MAINTENANCE</p> <ul style="list-style-type: none">A. Wash with warm soapy waterB. Inspect threads and repair as necessaryC. Check gaskets<ul style="list-style-type: none">1. Pliable2. Good condition<ul style="list-style-type: none">a. Free of cracksb. Not wornD. Graphite swivels as necessaryE. Exercise valve periodically to ensure smooth operation | |



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SUMMARY:

Large diameter hose may someday replace four-way valves in most applications, but as long as weak water systems exist, the appliance should not become obsolete.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).